

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)	
)	CC Docket No. 95-116
Telephone Number Portability)	RM 8535

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COMMENTS OF GTE

GTE SERVICE CORPORATION, on
behalf of its affiliated domestic
telephone and wireless operating
companies

David J. Gudino
1850 M Street, N.W.
Suite 1200
Washington, D.C. 20036
(202) 463-5212

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ITS ATTORNEY

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SUMMARY

Local number portability ("LNP") is one of the most complex issues faced by the industry. Because of its potential to affect the manner in which each and every call is processed in the public switched network ("PSN"), it presents formidable cost, customer impact and cost recovery issues that merit exacting scrutiny before any responsible decision can be reached regarding its implementation.

GTE shares the Commission's desire to promote competition in the provision of telecommunication services and agrees that LNP can contribute to its development. Before the Commission can conclude that LNP benefits consumers, however, its potential impact on competition must be weighed against the full cost of its implementation. In this regard, the level of customer demand and willingness to pay for LNP must weigh heavily in evaluating the potential impact of LNP on competition. If LNP only marginally promotes competition at a substantial cost, it will not benefit consumers. GTE firmly believes that a complete record must be established in this proceeding that reflects a careful analysis of each of the foregoing issues.

The preliminary results of a survey commissioned by GTE indicate that (1) although LNP will contribute to the development of competition in the market for local exchange service, competition will develop with or without LNP, (2) the effect on competition of proposals for service provider portability via existing geographic numbers, versus GTE's non-geographic proposal, which provides both service provider and location portability, is approximately the same, (3)

consumer demand for LNP declines significantly as the monthly fee for LNP rises, and (4) consumers would not like to see geographic telephone numbers lose their geographic significance. In general, the majority of consumers are willing to change service providers, even if a number change is required, if the price makes the new service a better value. These results underscore the need to fully evaluate the total cost of each LNP proposal.

GTE's LNP solution preserves the important functions served by geographic numbers through the use of the intelligent network to manage a subset of non-geographic LNP numbers. Along with their Directory Number, LNP customers would be assigned a network Routing Number in the standard NANP format. All calls to an LNP customer would trigger an SS7 query to the LNP database to obtain a translation of the dialed Directory Number to its associated Routing Number for routing instructions. LNP database queries would not be required on calls to non-LNP customers. Toll calls, E911 and 911 calls and operator services calls all would be accommodated.

GTE's LNP solution offers the most effective and cost-efficient proposal for number portability. It can provide both service provider portability and location portability on a uniform national basis at its inception at a fraction of the cost of the other proposals. GTE estimates that its cost for implementing its LNP solution will be approximately \$35 million. In stark contrast, the implementation of a geographic number solution of the type suggested by AT&T would cost GTE a staggering *\$1.65 billion* for all of its serving areas. These estimates do not include the cost of operational support systems modifications or subsequent

annual maintenance expenditures which, under an AT&T-like plan, could run into hundreds of millions of dollars annually. GTE believes that the costs of LNP should be borne by those customers who subscribe to the feature.

GTE has serious concerns regarding the potential impact on the PSN of the other number portability proposals. All of them would require significant investments for network modifications essentially to implement service provider portability only. The additional time, effort, cost and network impact of providing location portability under these plans is unknown. More importantly, they would all require a dismantling of the existing call routing system, which is based on the geographic significance of numbers, solely in order to implement number portability. GTE does not believe that such an exorbitantly expensive overhaul is either necessary or cost justified.

GTE urges the Commission to assume the leading role in guiding the industry towards a nationally uniform and cost-efficient LNP architecture. GTE firmly believes that such an architecture must efficiently accommodate the implementation of both service provider and location portability. To date, only GTE's solution can satisfy these requirements. Moreover, GTE's solution can more inexpensively accommodate 500 and 900 portability (if so ordered) than stand-alone solutions. Thus, GTE believes that the Commission should adopt GTE's LNP solution as the model for number portability.

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COMMENTS OF GTE

GTE Service Corporation ("GTE"), on behalf of its affiliated domestic telephone and wireless operating companies, submits the following comments in response to the Commission's Notice of Proposed Rulemaking ("NPRM"), FCC 95-284, released July 13, 1995, focusing on the issue of telephone number portability.

I. INTRODUCTION

Telephone number portability, also referred to as "local number portability" ("LNP"), is one of the most complex issues faced by the industry today. The type and scale of LNP ultimately adopted could have a profound impact on the manner in which each and every call is processed within the public switched network ("PSN"). LNP presents formidable cost, customer impact and cost recovery issues that merit exacting scrutiny before any responsible decision can be reached regarding its implementation. The issue is further complicated by the strategic impact of LNP on local exchange service competition. Consequently, at every turn in this proceeding, the Commission will be required

to reconcile competitive goals with the pragmatics of LNP implementation in order to arrive at a solution that is truly in the public interest.

GTE shares the Commission's desire to promote competition in the provision of telecommunication services and agrees with the Commission that LNP can "contribute to the development of competition among alternative providers of local telephone and other telecommunications services."¹ Before the Commission can conclude that LNP benefits consumers, however, it must weigh the potential contribution of LNP to the development of competition against the full cost of its implementation. If LNP provides only a marginal contribution at an extraordinary cost, it will not benefit consumers.

Because of its extremely far reaching implications, GTE has focused on the issue of LNP very closely over the last few years. GTE has been an active participant in the Industry Numbering Committee ("INC") workshop on LNP, to which it submitted the plan on which the Commission seeks comment in this proceeding.² To gain a better sense of the potential customer demand for LNP, GTE also commissioned a rigorous nationwide survey on the topics of service provider portability and location portability.

¹ NPRM at ¶ 7.

² In addition, at the end of 1993 GTE introduced the industry issue on 500 PCS portability to be addressed by the Industry Carrier Compatibility Forum ("ICCF"). GTE followed up by co-chairing the INC workshop on 500 PCS portability that worked this issue. The workshop's final report was presented to the Commission on May 15, 1995.

In these comments, GTE first discusses the preliminary results of its LNP survey and its views of the implications of those results. A comprehensive explanation of GTE's LNP proposal, addressing both technical and cost considerations, follows. The discussion then shifts to a presentation of the highlights of GTE's proposal. The comments conclude by addressing other discreet portability issues raised in the NPRM.

II. GTE'S LNP SURVEY

a. Background

As noted above, the two critical inputs necessary to make any decisions regarding LNP are cost and demand. Customer demand must be balanced against the cost of implementing and providing LNP if the public interest is to be served.³ Thus, GTE commissioned the customer survey discussed below to supplement the relatively small amount of empirical information regarding the potential customer demand for LNP in its various forms.

The level of customer demand and customer willingness to pay will also weigh heavily in the debate over the potential impact of LNP on local telephone competition. A low level of demand and/or willingness to pay would dispel any notion that LNP will have a dramatic impact on competition because presumably the ability of the customer to more easily change service providers will have been taken into account in determining the desirability of the feature. A low level

³ The Commission must not give weight to unsubstantiated representations regarding customer demand for LNP made by self-interested parties.

of demand and/or willingness to pay will also tax the wisdom of spending several hundreds of millions (if not billions) of dollars on LNP.

GTE firmly believes that a complete record must be established in this proceeding that reflects a careful analysis of each of the foregoing issues.

GTE's LNP survey was designed to assist in this endeavor by providing statistically significant results for use in quantifying the potential demand for LNP. The survey focused on two forms of LNP -- service provider portability and location portability. The customers surveyed were randomly selected residential and business customers of both GTE and four Regional Bell Operating Companies ("RBOCs"). The GTE customers were drawn from GTE's entire continental United States serving area. The RBOC customers were drawn equally from Dallas, Los Angeles, Seattle and Manassas, Virginia.

The survey was designed to elicit information regarding potential customer demand for LNP given certain variables such as cost and service provider. The survey also explored customer reaction to LNP from the *calling* party's point of view. This aspect of the survey focuses on customer reaction to possible effects of LNP such as the inability of the caller to determine the location of the person or entity being called, the time of day at that location, or whether the call will generate a toll charge.

b. The Preliminary Results of GTE's LNP Survey

Although GTE's LNP survey results are not yet final,⁴ the following preliminary conclusions can be drawn:

1. Although LNP will contribute to the development of competition in the market for local exchange service, competition will develop with or without LNP. Preliminary results indicate that the most important factor in a customer's decision on whether or not to change service providers is the impact on the customer's basic monthly rate for service. Customers will consider changing service providers even if they are required to change their telephone numbers in order to save money.
2. The effect on competition of proposals for service provider portability via existing geographic numbers, versus GTE's non-geographic proposal, which provides both service provider and location portability, is approximately the same.
3. Consumers are only willing to pay a modest price for LNP. Consumer demand for LNP declines significantly as the monthly fee for LNP rises.
4. The overwhelming majority of consumers feel that, when making calls, the most important aspect of the geographic number is knowing the location

⁴ GTE was not able to finalize the survey results in time for inclusion in these comments. Its request for an extension of the deadline for filing comments for this purpose was denied by the Commission on September 7, 1995. *Telephone Number Portability*, CC Docket 95-116, RM 8535, Order, DA 95-1924 (released September 7, 1995).

of the number being called. Consumers would not like to see geographic telephone numbers lose their geographic significance.

The survey results make it clear that number portability, while a factor, would not be the most important factor in the decision by most consumers to change local service providers; price is the most important factor. These results are similar to those reported by Pacific Bell to the Industry Numbering Committee, Local Number Portability Workshop on August 3, 1995, although GTE's survey was national in scope while Pacific Bell's was limited to California.

As the Commission correctly notes: "The competitive importance of service provider number portability depends primarily on the value that customers assign to their current telephone numbers."⁵ Contrary to MCI's Gallup survey, GTE's preliminary results indicate that a significant number of residential and business customers will change service providers, even if a number change is required, if the price makes the new service a better value.⁶

As also reflected in the preliminary survey results, while number portability may be an attractive feature for some consumers, most consumers will not pay a premium for it. Thus, the ultimate customer demand for number

⁵ NPRM at ¶ 22.

⁶ As the Commission is aware, there has been and will continue to be considerable activity involving NPA codes in major markets over the next few years due to number exhaust. GTE submits that there is little difference in the activities required of a customer to adjust to a new number resulting from an NPA code change (*i.e.*, informing parties, stationary replacement, etc.) than there would be from obtaining a portable number. In the latter case, however, the customer would no longer be affected by future NPA codes changes.

portability will be inversely related to its price. Once again, this shows that the Commission's policy objectives must center on implementing the most cost-effective form of number portability possible

Aside from the preliminary results of GTE's LNP survey, it should be noted that a significant portion of residential subscribers have unlisted or non-published numbers.⁷ As a group, these subscribers often change their numbers if their old numbers become known to certain parties.

III. GTE'S LNP SOLUTION INCORPORATES A BALANCED AND REASONABLE APPROACH TO NUMBER PORTABILITY

Although there may a difference of opinion as to what form LNP should take, there is no dispute that number portability, particularly portability of geographic numbers, will require numerous network modifications as well as changes in calling habits. Many of the required network modifications will result from the elimination of the functions currently served by geographic NANP numbers. Although the Commission notes some of these basic functions in the NPRM, it overlooks a host of other critical functions.⁸

Geographic numbers facilitate call rating which is premised on the fact that these numbers have a fixed location. The call transport distance can thus

⁷ As reported in USA Today, California (Sacramento 64.7%, Los Angeles 64.6%, and Oakland 64.4%) has the highest percentage of unlisted phone numbers. Florida (Sarasota 6.5%, Daytona Beach 11.1%, West Palm Beach 13.2%) has the lowest percentage of unlisted phone numbers. The survey was conducted in the 100 largest metro areas by Survey Sampling Inc.

⁸ The Commission notes that a geographic number "generally identifies the specific telecommunications customer being called, as well as the termination point of the call. In many instances, the number also specifies the service provider of the paying customer." (NPRM at ¶ 1.)

be determined from the number itself. Geographic numbers can also allow carriers to determine whether calls are intraLATA or interLATA, based upon the NPA-NXX dialed.

SS7 Alternate Billing Services ("ABS"), Billed Number Screening ("BNS") and Calling Name Delivery ("CND") all rely upon the NPA-NXX to determine which Line Information Database ("LIDB") to address a query. Through a process called Global Title Translation ("GTT") the correct routing of the query is determined through the use of a data table indexed by the NPA-NXX. The current table can hold approximately 200,000 entries. Because geographic LNP would require 10-digit translation (*e.g.*, when an alternative LEC ("ALEC") moves a LEC ported number to an ALEC LIDB), the data tables would be required to hold over 200,000,000 entries. The time and resources needed to maintain tables of this size would be enormous and the resulting call set-up delay significant.

ABS calls billed to a calling card, collect or third party, require a number of systems to navigate the resulting call record to the correct entity for billing, all of which depend upon the unique correlation between the geographic number and the specific billing entity.

Likewise, revenues collected from the billing of ABS intraLATA calls are presently distributed based upon the correlation of the geographic calling number and the billing entity. Once a geographic number is ported to an ALEC, the administration of billing and settlements will be directly affected and, without

modifications, could result in uncollectibles or the incorrect distribution of call revenues.

The impact on calling habits will also be profound. With the loss of the geographic significance of area codes, callers in many instances will not know whether the calls they make are local or toll, or even the time of day at the called party's location. Unless the caller has had recent contact with the called party, he or she will not know where the called party is located and may decide not to initiate or return a call that might otherwise have been made.

Thus, the implementation of portable geographic numbers will require substantial investments in alternative mechanisms to compensate for the loss of many vital network functions that rely upon the geographic significance of existing NANP numbers. In appreciation of this potential impact, GTE premised its LNP solution on the realization that it is neither cost efficient nor practical to divorce geographic numbers from their current functions in the network.

a. The Mechanics of GTE's Proposed LNP Solution

GTE's plan preserves the important functions served by geographic numbers through the use of non-geographic numbers. Customers desiring portable numbers would be assigned a non-geographic LNP Directory Number ("DN"). This number would be in one of the NPA codes reserved for non-geographic numbers, such as "333-XXX-XXXX".

GTE's solution would use the intelligent network ("IN") to manage the subset of non-geographic LNP numbers.⁹ Along with their Directory Number, LNP customers would be assigned a network Routing Number in the standard NANP format (if the customer currently has a geographic number, that number would be used). All calls to an LNP customer, whether intra-office local, toll, or inter-LATA, whether they were to a customer who has changed providers or not, would trigger an SS7 query to the LNP database to obtain a translation of the dialed Directory Number to its associated Routing Number for routing instructions. LNP database queries would not be required on calls to non-LNP customers.

Through this approach, only those calls invoking the portability function would be affected by the network modifications necessary to complete calls to and from portable numbers. Thus, for example, calls to non-LNP customers will not experience any additional post-dial delay. In contrast, portability of geographic numbers would require that *all* calls, whether to portable numbers or not, be subject to an LNP database query before they could be properly routed. Finally, because GTE's solution can provide portability on either a localized or national basis, it would provide the Commission with flexibility in working with the states to determine the appropriate scale on which LNP initially should be implemented.

⁹ Although GTE's LNP solution would require IN software and SS7 connectivity to perform database queries, end-to-end SS7 connectivity would not be required and these queries can be done by the first IN/SS7 capable switch.

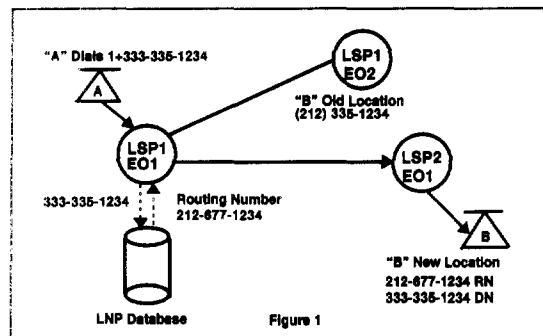
The following are three scenarios illustrating how calls using portable numbers would be processed under GTE's solution on an intraswitch, interswitch and toll basis.

(1) Interswitch Calls (Figure 1)

Station B is the Directory Number ("DN") that has the LNP feature capability. Its number 333-335-1234 was originally assigned as part of the 212-335 NXX to Local Service Provider 1 ("LSP1") End Office 2 ("EO2") but has since been ported to LSP2 EO1.

*Subscriber A calls
Subscriber B.*

Subscriber A dials 1+333-335-1234. LSP1 EO1 recognizes that the call is to a Directory Number that is marked for "local portability" and requires an LNP database query.



LSP1 EO1 sends a query containing the full 10-digit number to the LNP database.

The LNP database receives the query, performs a lookup on the LNP ported numbers table, and returns the Routing Number ("RN") to LSP1 EO1.

LSP1 EO1 receives the response that the called party is at network location 212-677-1234 and routes the call to LSP2 EO1.

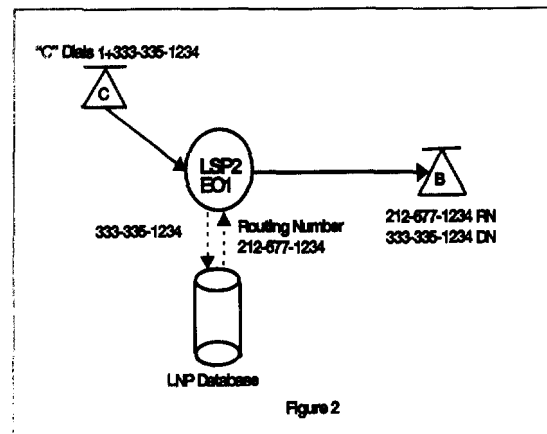
LSP2 EO 1 terminates the call to Subscriber B.

(2) Intraswitch Calls (Figure 2)

*Subscriber C calls
Subscriber B.*

Subscriber C on LSP2 EO1
dials 1+333-335-1234 to reach
Subscriber B.

LSP2 EO1 analyzes the NPA
digits dialed. It determines
that the number is an LNP
Directory Number and sends a
10-digit query to the LNP
database.



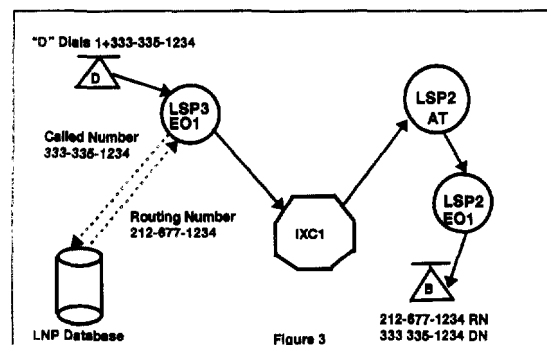
The LNP database determines that the call terminates on the originating switch and returns the Routing Number to LSP2 EO1. LSP2 EO1 recognizes the Routing Number as associated with itself and terminates the call to Subscriber B.

(3) Toll Call Flows (Figure 3)

Subscriber D calls Subscriber B.

- (a) Subscriber D dials 1+333-335-1234 to reach Subscriber B. LSP3 EO1 recognizes the 333 NPA as reserved for LNP Directory Numbers and sends a 10-digit number query to the LNP database. The LNP database returns the Routing Number. LSP3 EO1 determines that the call is a toll call and therefore routes the call to Subscriber D's presubscribed interexchange carrier ("IXC1").

If direct connectivity exists between IXC1 and LSP2 EO1, then IXC1's switch routes the call to LSP2 EO1. Otherwise IXC1 routes the call to a connected LSP Access Tandem ("LSP2 AT"), which in turn routes the call to LSP2 EO1.



LSP2 EO1 terminates the call to Subscriber B.

b. The Handling of Toll Calls

In a portable environment, unless callers have had recent contact with the called LNP customer, they will not know with certainty whether the LNP customer is still in the same location. Consequently, it will be necessary to provide a caller with an announcement that the call will result in a toll charge and allow the caller the option of terminating the call prior to completion.¹⁰

c. E911 and 911 Call Scenarios

On E911 and 911 type calls, the calling party number displayed at the emergency service facility would be the caller's Network Routing Number, indicating the customer's network location. GTE does not foresee any changes that would be required in this area.

d. Operator Services

A call from an LNP customer handled by Operator Services will display that customer's network Routing Number as the calling party number. If the Operator Services call is to an LNP customer, the LNP number would first be translated at the originating end office or access tandem (for electromechanical switches) and then the call connected to the Operator Services switch, thereby signaling and displaying the network Routing Number to the operator as the called number. Operator Services calls billed to an LNP number would have to

¹⁰ It should be noted that there is no practical way to advise the caller of the rate of the toll charge. Even Stored Program Control end offices have no call rating functionality and since the call could be delivered via any IXC's network, applicable rates will constantly vary.

be queried and translated at the Operator Services switch, and then the Network Routing Number validated (or screened) and included in the record for customer billing.

IV. THE DIFFERENCE BETWEEN THE IMPLEMENTATION COSTS OF GTE'S LNP SOLUTION AND GEOGRAPHIC LNP IS STAGGERING

As the Commission correctly notes, "[i]n order to weigh the public interest benefits of deploying a longer-term number portability solution against the current interim measures, we must consider the costs associated with designing, building, and deploying such a longer-term solution."¹¹ Considering all aspects of the various LNP plans now before the Commission, it is intuitively clear that by minimizing the network changes required to enable number portability, GTE's solution will cost the industry and telecommunications users significantly less than any of the other proposals.

This conclusion is borne out by GTE's cost estimates. GTE has determined that its implementation costs under its non-geographic number portability solution would be approximately \$35 million. In stark contrast, the implementation of a geographic number solution of the type suggested by AT&T would cost GTE a staggering *\$1.65 billion* for its serving areas.¹² (Further details regarding these cost estimates are set forth in Appendix A.) And it bears

¹¹ NPRM at ¶ 53.

¹² GTE believes that its potential cost of implementing any plan that divorces numbers from their geographic significance will exceed one billion dollars, due to system additions and the subsequent increase in the complexity of call processing.

noting that these estimates are of GTE's implementation costs *only* -- they are not industry-wide estimates. Also, they do not include the cost of operations support systems modifications or subsequent annual maintenance expenditures which, under an AT&T-like plan, could run into hundreds of millions of dollars annually.

The Commission asks "how and from whom the costs of designing, building, deploying, and operating a database system should be recovered."¹³ As indicated by the preliminary results of GTE's survey, number portability will not be uniformly embraced by consumers. Therefore, GTE believes that the costs of implementing any form of number portability should be treated in the same way as the costs for any discretionary service are treated -- they should be recovered from those benefiting from the feature. Just as it would be inappropriate to make all telecommunications users support the costs of CLASS services (*e.g.*, Call Waiting), so would it be inappropriate to force all telecommunications users to pay for the costs associated with number portability. It is therefore imperative that the Commission not endorse any plan that is not the most cost-efficient and market driven approach to number portability.

V. GTE'S PROPOSED LNP SOLUTION OFFERS THE MOST RATIONAL APPROACH TO NUMBER PORTABILITY

As set forth below, GTE's proposed LNP solution is superior in a number of ways to the other LNP proposals being considered by the Commission:

¹³ NPRM at ¶ 54.

1. Ease of Implementation. GTE's solution would avoid the tremendous number of modifications that would be required under the other proposals for such things as switch upgrades, alternative functions to replace those served by geographic numbers, etc.¹⁴ Because GTE's solution can be implemented without dismantling the existing NANP system of geographic numbers, it can be implemented easier and faster. Future upgrades and additions to capacity can take place over time, if necessary, as the market reacts to the availability of LNP.

2. Modified Call Processing Limited to LNP Numbers Only. While other proposals may require that all calls be processed in a portable environment, GTE's solution would only require that LNP numbers be screened for routing purposes.¹⁵ This selective screening will limit the impact of necessary modifications to LNP customers only, while easing the tremendous strain that would be imposed on the PSN if every call (*i.e.*, approximately 80,000 call attempts per second) had to be screened.

3. Both Service Provider and Location Portability Available. As the Commission notes, "[o]ne of the central issues in either a service provider or location portability environment is the geographic region within which numbers

¹⁴ None of the other proposals has been sufficiently tested to determine their impact on features, billing, OSS, etc.

¹⁵ Under each of the other plans, every local call will require screening to determine if the dialed NXX is a portable number. If it is, a database query will be required to determine the identity of the called party's carrier.

should be portable."¹⁶ GTE's solution would provide both service provider portability and the broadest possible location portability upon implementation.¹⁷ Once the customer has been assigned a non-geographic number, that customer would be able to keep that number in any geographic area covered by the North American Numbering Plan. In contrast, the other proposals restrict location portability even within the NPA. Without this restriction, these plans risk creating a network architecture so complex and expensive that the market will not be able to support LNP.

4. Implementation Costs Minimized. GTE's solution would provide LNP at a fraction of the cost of other LNP proposals because of the less extensive upgrades and other modifications required.¹⁸ As the preliminary results of GTE's survey indicate, the level of consumer demand for LNP is inversely related to the cost of the feature. It follows that if costs are not kept to an absolute minimum, fewer subscribers will elect the service, resulting in even

¹⁶ NPRM at ¶ 48.

¹⁷ In the long term, customers who subscribe to number portability will expect to retain their number when changing their physical address. It is not reasonable to expect that location portability can be contained within an arbitrary geographic boundary. Therefore, an effective portability solution must provide location portability with minimal restrictions.

¹⁸ For example, the Commission notes that AT&T's plan requires advanced intelligent network ("AIN") capabilities. NPRM at ¶ 37. While GTE's solution requires the use of intelligent network functionality, it does not require that switches be upgraded to AIN capabilities. Moreover, AT&T's plan has the potential of requiring that a number of central office codes be opened in each office, thereby requiring additional table structures which consume real time processor resources and memory.

higher costs per subscriber. This downward spiral could effectively price LNP out of the market.

5. Numbers Would Easily Be Identified as Portable Numbers.

Because of the distinctive NPA/SAC code, callers would be able to easily identify a number as being portable under GTE's LNP solution. Thus, a caller could choose whether or not to dial the number in much the same way as is currently done when a caller is faced with a completely unknown area code. Distinctive portable numbers would also avoid the massive confusion likely to result from all NANP numbers losing their geographic significance.

6. E911 and 911 Considerations. GTE strongly agrees that E911 and 911 services are critical to the public safety and are important features of the public switched network.¹⁹ As discussed earlier, GTE's solution would not disrupt existing E911 and 911 services. All other proposals would either require additional steps to contact the E911 or 911 emergency facility or extra database queries to identify the caller's location. Each step added to the process increases the potential for errors.

VI. GTE HAS SERIOUS CONCERNS REGARDING THE POTENTIAL IMPACT ON THE PSN OF THE OTHER NUMBER PORTABILITY PROPOSALS

a. Shortsighted Approaches

All of the other LNP proposals before the Commission incorporate a phased-in approach to service provider and location portability. This means that

¹⁹ See NPRM at ¶ 41.

they will only satisfy part of the overall portability objective. The MCI plan will not support location portability. Similarly, the AT&T proposal has serious limitations on the extent to which it can support location portability. As a result, the realization of full number portability under these plans will require additional planning and implementation efforts in the future which will generate further costs, further disruptions to the PSN and further customer confusion. Thus far, only GTE's proposed solution provides both service provider and location portability in one step, with the least amount of cost, confusion and disruption to the network.

b. Uprooting the Existing PSN Infrastructure

GTE believes that it is not in the public interest to disrupt the manner in which all calls are currently routed over the PSN solely in order to provide the additional feature of number portability. All of the proposals that use geographic numbers will require new methodologies for call routing. In addition, most of them will require AIN capabilities and revisions to existing signaling protocols and parameters. They also will require operations support systems modifications (including billing system changes), the development of new industry standards, extensive new software and hardware for existing switches, and in some cases, switch memory upgrade. The existing system has a proven level of efficiency. Consequently, dismantling the system (at a tremendous cost) to provide one network feature is neither technically nor economically justifiable.

GTE favors an approach that leaves the existing infrastructure in place. Because GTE's proposed solution would work largely within the parameters of